

**Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services**

**STATEMENT OF BASIS**

**Calumet Cotton Valley  
Calumet Lubricants Company, L.P.  
Cotton Valley, Webster Parish, Louisiana  
Agency Interest Number: 312  
Activity Number: PER20090005  
Draft Permit 3080-00010-V5**

**I. APPLICANT:**

**Company:**

Calumet Lubricants Company, L.P.  
P. O. Box 97  
Cotton Valley, LA 71018

**Facility:**

Calumet Cotton Valley  
1756 Old Hwy 7  
Cotton Valley, LA 71018  
Approximate UTM coordinates are 461.30 kilometers East and 3628.60  
kilometers North, Zone 15  
SIC Code: 2911

**II. FACILITY AND CURRENT PERMIT STATUS:**

Cotton Valley Facility is a small refinery which uses atmospheric distillation and hydrotreating to refine "sweet" local crude oil into various petroleum products, including but not limited to aliphatic and hydrotreated low aromatic solvents, light straight run, and diesel. The facility is primarily dedicated to manufacturing aliphatic solvents. The product range of the aliphatic solvents includes hydrotreating low aromatic solvents as well as conventionally refined products. These specialty solvents find applications in a wide variety of markets including paints and coating, inks, extraction, and mining.

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One Part 70 permit addressing the facility has already been issued.

Permit #	Units or Sources	Date Issued
3080-00010-V4	Entire Facility	06/16/2009

### III. PROPOSED PERMIT / PROJECT INFORMATION:

#### Proposed Permit

A permit application and Emission Inventory Questionnaire was submitted by Calumet Lubricants Company, L.P. – Calumet Cotton Valley on July 16, 2009 requesting a Part 70 operating permit renewal/modification.

#### Project Description

The proposed modifications of the facility are as follows:

1. Remove Tank 33 (EQT043) from the L/H VOL IFR CAP. This tank will be used for the storage of wastewater; therefore it is being permitted separately;
2. Change fugitive emissions (Emission Point FE/FUG002) to address a shift of components associated with the Utility Fractionator (1000 Unit) from light liquid service to heavy liquid service as represented in an insignificant activity that was approved in a Case-by Case of April 2009;
3. Increase the heat rate of the Utility Fractionator Process Heater (Emission Point 602/1000/EQT082) from 6.18 MM BTU/hr to 9 MM BTU/hr. This increase is needed for the change from light liquid service to heavy liquid service in the 1000 Unit;
4. Delete 40 CFR 60 Subpart J requirements for the Utility Fractionator Process Heater (Emission Point 602/1000/EQT082) since the unit will convert from refinery fuel gas to natural gas;
5. Increase the throughput through tank cap VFR/HFR CAP from 272,400 bbl/yr to 354,120 bbl/yr to allow for greater operational flexibility;
6. Increase the operating hours of the firewater pumps (Emission Point FP/EQT072) from 50 to 300 hours per year; and
7. Add emission points Dual Phase Extraction System (DPE/EQT107) and Dual Phase Extraction System - Oil/Water Separator (DPE OWS/EQT108) for the remediation system. These systems will be used to remove phase-separated hydrocarbons that are beneath the facility. A detailed description of the remediation system is included in the Aggressive Remediation Plan Design which was approved on June 8, 2009.

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**Permitted Air Emissions**

Estimated emissions in tons per year are as follows:

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
PM <sub>10</sub>	25.76	25.98	+ 0.22
SO <sub>2</sub>	31.94	31.43	- 0.51
NO <sub>x</sub>	124.59	127.58	+ 2.99
CO	137.84	139.07	+ 1.23
VOC *	415.76	428.53	+ 12.77

**\*VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):**

<u>Pollutant</u>	<u>Before</u>	<u>After</u>	<u>Change</u>
Benzene	5.89	6.17	+ 0.28
Cumene	<0.01	<0.01	-
Ethylbenzene	1.21	1.23	+ 0.02
Lead Compounds	<0.01	<0.01	-
Methyl Isobutyl Ketone	<0.01	<0.01	-
Naphthalene	<0.01	<0.01	-
Toluene	5.30	5.44	+ 0.14
Xylene (mixed Isomers)	6.60	6.85	+ 0.25
n-Hexane	5.65	4.72	- 0.93
Total	24.65	24.36	- 0.29

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**Regulatory Analysis**

This permit was reviewed for compliance with the Louisiana Part 70 operating permit program, Louisiana Air Quality Regulations, New Source Performance Standards (NSPS), and NESHAP. Prevention of Significant Deterioration do not apply.

**Louisiana Air Quality Regulations and NSPS**

The applicability of the appropriate regulations is straightforward and provided in the Facility Specific Requirements Section of the draft permit, or Section X of the Air Permit Briefing Sheet. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are provided in the Facility Specific Requirements Section of the draft permit, or explained in Section XI of the Air Permit Briefing Sheet.

**Prevention of Significant Deterioration Applicability**

The Calumet Cotton Valley is an existing facility. There have been no increases associated with this modification that would trigger PSD review. Therefore, the PSD regulations do not apply.

**MACT Requirements**

Calumet Cotton Valley is a minor source of toxic air pollutants (TAPs) and hazardous air pollutants (HAPs). MACT is not required.

**Air Modeling Analysis**

Air Modeling Analysis is not required.

**General Condition XVII Activities**

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to Section VIII of the draft Part 70 permit.

**Insignificant Activities**

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to Section IX of the draft Part 70 permit.

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**IV. Permit Shields**

A permit shield was not requested.

**V. Periodic Monitoring**

See Specific Requirements

<b>VI. Applicability and Exemptions of Selected Subject Items</b>		
<b>ID No:</b>	<b>Requirement</b>	<b>Notes</b>
	See Tables X and XI of Air Briefing Sheet	

<b>VII. Streamlined Requirements</b>			
<b>Unit or Plant Site</b>	<b>Programs Being Streamlined</b>	<b>Stream Applicability</b>	<b>Overall Most Stringent Program</b>
N/A			

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## **Glossary**

**Best Available Control Technologies (BACT)** - An emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under this part which would be emitted from any proposed major stationary source or major modification which the administrative authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant.

**Carbon Monoxide (CO)** – A colorless, odorless gas which is an oxide of carbon.

**Grandfathered Status**- Those facilities that were under actual construction or operation as of June 19, 1969, the signature date of the original Clean Air Act. These facilities are not required to obtain a permit. Facilities that are subject to Part 70 (Title V) requirements lose grandfathered status and must apply for a permit.

**Maximum Achievable Control Technology (MACT)** - The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

**New Source Review (NSR)** - A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

**Nitrogen Oxides (NO<sub>x</sub>)** - Compounds whose molecules consists of nitrogen and oxygen.

**National Emission Standards for Hazardous Air Pollutants (NESHAP)** – Toxic air emission standards for specific types of facilities, as outlined in 40 CFR Parts 61 through 63.

**Nonattainment New Source Review (NNSR)** - A New Source Review permitting program for major sources in geographic areas that do not meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. Nonattainment NSR is designed to ensure that emissions associated with new or modified sources will be regulated with the goal of improving ambient air quality.

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Organic Compound - Any compound of carbon and another element. Examples: Methane (CH<sub>4</sub>), Ethane (C<sub>2</sub>H<sub>6</sub>), Carbon Disulfide (CS<sub>2</sub>)

PAI Pesticide Active Ingredient MACT – any facility that is subject to 40 CFR 63 Subpart MMM

Part 70 Operating Permit- Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit:  $\geq 10$  tons per year of any toxic air pollutant;  $\geq 25$  tons of total toxic air pollutants; and  $\geq 100$  tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM<sub>10</sub>- Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) - The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO<sub>2</sub>) – An oxide of sulphur.

Title V permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) - Any organic compound which participates in atmospheric photochemical reactions; that is, any organic compound other than those which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.